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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,156	04/25/2001	Shunpei Yamazaki	12732-033001	4159

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EXAMINER

KIELIN, ERIK J

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/841,156

Examiner

Erik Kielin

Applicant(s)

YAMAZAKI ET AL.

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-- The MAILING DATE of this communication appears n th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-20 and 23-45 is/are pending in the application.
- 4a) Of the above claim(s) 23-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7,17.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 23-45 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The new claims introduce species different from those species already examined. The species of method of forming various light-emitting devices already examined include, *inter alia*, (1) a light emitting element on a front surface of a substrate with a color filter bonded to the back surface; (2) a light emitting element and a semiconductor element on a front surface of a substrate with a color filter bonded to the back surface of the substrate; (3) a light emitting element on a front surface of a substrate with a color filter formed of a transparent substrate and a colored layer bonded to the back surface; and (4) a light emitting element and a semiconductor element on a front surface of a substrate with a color filter formed of a transparent substrate and a colored layer and bonded to the back surface of the substrate.

Since applicant has received an action on the merits for the originally presented invention --a reasonable number of species-- this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 23-45 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. Claims 11, 14, 17, and 12, 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 11 and 12 recite plural substrates: the substrate upon which the light-emitting element is formed and the substrate upon which a colored layer is formed. Consequently it is unclear, as presently written, what is meant by the limitation, "a colored layer at a back surface of the substrate."

The remaining claims are rejected for depending from the above rejected claims.

For the purposes of patentability, the claims will be interpreted as best understood by Examiner.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by **JP 8-162269**.

JP 8-162269 discloses forming a light emitting element **3, 4a-4e, 6** at the front surface of a substrate **2**; and bonding a color filter **1**, at the back surface of the substrate. (See Abstract and Figure.)

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6. Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,396,304 (**Salerno et al.**).

Regarding claims 9 and 10, **Salerno** discloses a method of manufacturing a light-emitting device comprising,

forming a semiconductor element **1203** and light emitting element **1204** electrically connected to the semiconductor element **1203**, both at the front surface of a substrate **1201** (col. 44, lines 17-30; Fig. 47); and

bonding a color filter **1212**, wherein the color filter at the back surface of the substrate **1201**. This configuration is shown in Fig. 46C with color filter element **1156** bonded to the back of substrate **1142** with the semiconductor elements (the transistor **1146** and pixel electrode **1148**) shown on the opposite side of **1142**. This configuration is also shown in Fig. 37. The color filter plate 1006 is bonded to the back of the substrate 1008 upon which the semiconductor elements ("pixel elements 1016") are formed. (See also col. 43, line 46 to col. 46, line 34. See also col. 2, lines 21-52; col. 2, line 66 to col. 3, line 5; col. 6, lines 22-42; col. 8, line 27 to col. 9, line 55.)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 8-162269** in view of US 5,276,999 (**Bando**).

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The prior art of **JP 8-162269**, as explained above, discloses each of the claimed features except for indicating if the backside of the substrate is chemically-mechanically polished.

Bando teaches chemical mechanical polishing of substrates (col. 5, lines 25-30), for the high flatness required of displays. (See col. 1, lines 6-12.)

It would have been obvious for one of ordinary skill in the art, at the time of the invention to polish the substrate, both front and back, of **JP 8-162269** because **Bando** teaches that high flatness is required for light-emitting displays, such as that in **JP 8-162269**.

9. Claims 9-14, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,396,304 (**Salerno et al.**) in view of US 6,392,340 B2 (**Yoneda et al.**).

The prior art of **Salerno**, as explained above, discloses each of the claimed features except for indicating that the color filter is a transparent substrate with a colored layer thereon.

Yoneda discloses a method of manufacturing a light-emitting device comprising having a semiconductor element electrically connected to a light-emitting device (cover Fig.) and a color filter 22. **Yoneda** states at col. 2, lines 56-64,

“In the color display apparatus according to the present invention, a **color filter layer** or color conversion layer acting as a color element is **formed on a transparent substrate** and can be **bonded to an organic EL element**. Moreover, since the color element requires only one kind of color emitted from the organic EL element, it is not necessary to use plural kinds of luminous materials to the luminous element layers of the organic EL element, so that **the fabrication process can be simplified.**”
(Emphasis added.)

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It would have been obvious for one of ordinary skill in the art, at the time of the invention to form the color filter of **Salerno** as a colored layer on a transparent substrate and then bond it to the EL substrate, to simplify the process of Salerno, as taught by **Yoneda**.

Regarding claims 13 and 18, **Salerno** discloses that there may be a polarization plate **1002** bonded ("secured") to the transparent color filter substrate **1006** (Fig. 37, col. 37, lines 8-19).

Regarding claims 14 and 20, **Salerno** discloses that the substrate may be plastic which is a polymeric material (col. 9, lines 48-55).

10. Claims 15-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Salerno** in view of **Yoneda** as applied to claims 9-12 above, and further in view of Bando.

The prior art of **Salerno** in view of **Yoneda**, as explained above, discloses each of the claimed features except for indicating if the backside of the substrate is chemically-mechanically polished.

Bando teaches chemical mechanical polishing of substrates (col. 5, lines 25-30), for the high flatness required of displays. (See col. 1, lines 6-12.)

It would have been obvious for one of ordinary skill in the art, at the time of the invention to polish the substrate, both front and back, of **Salerno** because **Bando** teaches that high flatness is required for light-emitting displays, such as that in **Salerno**.

Response to Arguments

11. Applicant's arguments with respect to claims 9-20 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

This action is made non-final to give applicant the opportunity to respond to the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik Kielin whose telephone number is 703-306-5980. The examiner can normally be reached on 9:00 - 19:30 on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached at 703-308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Erik Kielin
May 31, 2003